research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

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FILE 'HOME' ENTERED AT 10:32:25 ON 23 APR 2003

=> file caplus
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'CAPLUS' ENTERED AT 10:32:31 ON 23 APR 2003
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FILE COVERS 1907 - 23 Apr 2003 VOL 138 ISS 17
FILE LAST UPDATED: 22 Apr 2003 (20030422/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s capillary (3w) electrophor?
        112027 CAPILLARY
        240834 ELECTROPHOR?
L1       17536 CAPILLARY (3W) ELECTROPHOR?

=> s electrokinetic (3w) chromatogr?
         13705 ELECTROKINETIC
        380385 CHROMATOGR?
L2        2020 ELECTROKINETIC (3W) CHROMATOGR?

=> s electrochromatogr? or (electro (w) chromatogr?)
          2995 ELECTROCHROMATOGR?
         68344 ELECTRO
        380385 CHROMATOGR?
            18 ELECTRO (W) CHROMATOGR?
L3        3004 ELECTROCHROMATOGR? OR (ELECTRO (W) CHROMATOGR?)

=> s isoelectric (2w) focus?
          8526 ISOELECTRIC
        166652 FOCUS?
L4        4848 ISOELECTRIC (2W) FOCUS?

=> s electrofocus? or (electro (w) focus?)
          1946 ELECTROFOCUS?
         68344 ELECTRO
        166652 FOCUS?
            14 ELECTRO (W) FOCUS?
L5        1957 ELECTROFOCUS? OR (ELECTRO (W) FOCUS?)
```

DT Conference
LA English
AB A com. soft **laser scanning** densitometer was compared with other app. for tracing the electrophoretic patterns of catalase and Hb as well as for tracing closely spaced black lines on an illustration plate which simulated protein bands. It was found that in the densitometric tracings of catalase, narrow laser beams retain the resoln. obtained by **electrofocusing** and permit a valid detn. of zone spreading. Optimal resoln. was by a 3-mm long and 50-.mu.m wide laser beam. **Scanning** with white-**light** systems at various slit widths did not faithfully retain the fine resoln. of catalase. Similar results were obsd. for Hb. The area under a peak was proportional to protein concn. unless the max. absorbance of a stained band was >1.8.

L8 ANSWER 41 OF 44 CAPLUS COPYRIGHT 2003 ACS
AN 1977:563652 CAPLUS
DN 87:163652
TI Immunocore **electrofocusing**: a separation and detection technique amenable to scanning densitometry
AU Zeineh, R. A.
CS Div. Med. Res., Arab Dev. Inst., Tripoli, Libya
SO Electrofocusing Isotachophoresis, Proc. Int. Symp. (1977), Meeting Date 1976, 153-4. Editor(s): Radola, Bertold J.; Graesslin, Dieter. Publisher: de Gruyter, Berlin, Ger.
CODEN: 36PGA8
DT Conference
LA English
AB Immunocore **electrofocusing** (ICEF) of serum proteins was performed on a hollow cylinder of polyacrylamide gel, the core of which then was filled with agar-contg. antiserums. The precipitin bands formed in the agar core were investigated with soft **laser scanning** densitometry. ICEF of human serum against polyvalent antiserums revealed 146 discrete precipitin bands. The densitometric tracing made by the soft **laser scanner** revealed compatible resoln. The linear range for quantitating individual bands of serum orosomucoid was 1-18 .mu.g. A linear range of 0.1-1.5 .mu.g was achieved by dilg. the antiserums. Antigen excess produces a diffuse wide band that gradually splits into 2 which diffusely migrate sideways to zones of equivalence. ICEF retains and amplifies the resoln. of **electrofocusing** but not as efficiently as **electrofocusing** followed by rocket formation.

L8 ANSWER 42 OF 44 CAPLUS COPYRIGHT 2003 ACS
AN 1975:151620 CAPLUS
DN 82:151620
TI Soft **laser scanning** densitometer for quantitation of tube **isoelectric focusing**
AU Zeineh, Rashid A.; Nijm, William P.; Al-Azzawi, Fouad H.
CS Chicago Med. Sch., Chicago, IL, USA
SO American Laboratory (Shelton, CT, United States) (1975), 7(2), 51-8
CODEN: ALBYBL; ISSN: 0044-7749
DT Journal
LA English
AB A densitometer was described which consists of a new soft **laser scanner**, a nonslit system with a beam width adjustable down to 3 .mu.m, and highly monochromatic coherent light of variable intensity.

=>

on-column fluorescent la[illegible]ing was used to illustrate the [illegible]ique advantages of this exptl. [illegible]esign.

L8 ANSWER 28 OF 44 CAPLUS COPYRIGHT 2003 ACS
AN 1995:746741 CAPLUS
DN 123:137735
TI Spatial-Scanning **Laser** Fluorescence Detection for **Capillary Electrophoresis**
AU Beale, Stephen C.; Sudmeier, Sara Jane
CS Department of Chemistry, University of Alabama, Birmingham, AL, 35294, USA
SO Analytical Chemistry (1995), 67(18), 3367-71
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
AB A laser-induced fluorescence (LIF) detector using epi-illumination and confocal optical detection geometry is described. The LIF detector is designed to scan the entire length of the sepn. capillary. The capillary is mounted on a precision translational stage which moves the entire capillary through the probe beam. The design of the **laser scanner** and the results from optimization expts. are presented. The LIF scanner can be used to monitor fluorescence from fluorescein isothiocyanate-labeled proteins focused by capillary isoelec. focusing or to follow the time course of a sepn. Dynamically changing the effective sepn. length is shown to offer a means to decrease anal. time. A method for directly measuring the diffusion coeff. is also presented.

L8 ANSWER 29 OF 44 CAPLUS COPYRIGHT 2003 ACS
AN 1995:549135 CAPLUS
DN 123:134251
TI Fast capillary-scanning system for detecting fluorescently labeled DNA sequencing fragments separated by **capillary** gel **electrophoresis**
AU Kim, S.; Yoo, H. J.; Nam, H.-G.; Hahn, J. H.
CS Department of Chemistry, Pohang University of Science and Technology, Pohang, 790-784, S. Korea
SO Chromatographia (1995), 40(5/6), 345-9
CODEN: CHRGB7; ISSN: 0009-5893
PB Vieweg
DT Journal
LA English
AB A capillary-scanning system for increasing the total throughput of DNA sequencing has been developed. The DNA sequencing method using the system features a spatial and temporal sepn. of laser-induced fluorescence detection from **capillary** gel **electrophoresis**. Fluorescently labeled adenine base fragments of pBluescript SK(-) were produced in enzymic sequencing reactions, and sepd. by **capillary** gel **electrophoresis** using UV-visible transparent capillaries filled with 8 % T, 0 % C polyacrylamide gel. The capillary contg. all bands of the fragments was then scanned longitudinally with a 488 nm argon ion laser beam in 2.6 min. The adenine base sequence of the DNA was detd. out to 400 bases by detecting fluorescence signals generated from the bands during the scan. The present scan speed is essentially limited by a slow strip-chart recorder and could be greatly increased by employing a fast data acquisition system.

L8 ANSWER 40 OF 44 CAPLUS COPYRIGHT 2003 ACS
AN 1977:580127 CAPLUS
DN 87:180127
TI Soft **laser scanning** densitometer compatible with the high resolution obtained by **electrofocusing**
AU Zeineh, R. A.
CS Div. Med. Res., Arab Dev. Inst., Tripoli, Libya
SO Electrofocusing Isotachophoresis, Proc. Int. Symp. (1977), Meeting Date 1976, 147-51. Editor(s): Radola, Bertold J.; Graesslin, Dieter. Publisher: de Gruyter, Berlin, Ger.
CODEN: 36PGA8

SO Electrophoresis (2001), [illegible]16), 3490-3496
CODEN: ELCTDN; ISSN: 0173[illegible]835
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB A computer-controlled galvanometer scanner is adapted for **scanning** a focused **laser** beam across a 96-capillary array for laser-induced fluorescence detection. The signal at a single photomultiplier tube is temporally sorted to distinguish among the capillaries. The limit of detection for fluoresceins is 3 .times. 10-11 M (S/N = 3) for 5 mW of total **laser** power **scanned** at 4 Hz. The obsd. cross-talk among capillaries is 0.2%. Advantages include the efficient use of light due to the high duty-cycle of step scan, good detection performance due to the redn. of stray light, ruggedness due to the small mass of the galvanometer mirror, low cost due to the simplicity of components, and flexibility due to the independent paths for excitation and emission.
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 12 OF 44 CAPLUS COPYRIGHT 2003 ACS
AN 2000:610827 CAPLUS
DN 133:160536
TI Post electrophoresis capillary scanning apparatus
IN Han, Jong-hoon; Nam, Hong-kil; Kim, Soo-hyun; Yu, Hyun-joo
PA Pohang University of Science and Technology, S. Korea
SO Repub. Korea, No pp. given
CODEN: KRXXFC
DT Patent
LA Korean
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	KR 9710972	B1	19970705	KR 1993-21297	19931014
PRAI	KR 1993-21297		19931014		

AB There is provided a scan-detecting device which is useful for sequencing technique of DNA basic order **and** which is used after **capillary** tube gel **electrophoresis** using **laser**. The device is comprised of a light source for providing light of different wave each other for investigation through sample, a means for moving capillary tube for sample to be **scanned** by **light**, a means for collimating light which is investigated through sample and generated, a means for selecting interactive wave with sample **from** the collimated light, and a means for detecting light of the selected wave.

L8 ANSWER 27 OF 44 CAPLUS COPYRIGHT 2003 ACS
AN 1995:1005863 CAPLUS
DN 124:81282
TI Evaluation of a spatial **scanning laser** fluorometric detector for **capillary electrophoresis**: application to studies of band migration and dispersion
AU Clark, Brian K.; Sepaniak, Michael J.
CS Dep. of Chemistry, University of Tennessee, Knoxville, TN, 37996-1600, USA
SO Journal of Microcolumn Separations (1995), 7(6), 593-601
CODEN: JMSEEJ; ISSN: 1040-7685
PB Wiley
DT Journal
LA English
AB The authors report herein the development and evaluation of modified **capillary electrophoresis** instrumentation with laser fluorometric detection which **allows** for the convenient and precise translation of the detection **zone** along the length of the sepn. column. This instrumentation is utilized for fundamental studies of band dispersion, analyte mobility **alterations**, sample stacking, and the detn. of diffusion coeffs. The **feasibility** of using this instrumentation to improve the signal/noise ratio **and** decrease anal. time is also presented. DNA restriction digest sepns. employing sol. polymer buffer systems with

(FILE 'HOME' ENTERED AT 10:32:25 ON 23 APR 2003)

FILE 'CAPLUS' ENTERED AT 10:32:31 ON 23 APR 2003
L1 17536 S CAPILLARY (3W) ELECTROPHOR?
L2 2020 S ELECTROKINETIC (3W) CHROMATOGR?
L3 3004 S ELECTROCHROMATOGR? OR (ELECTRO (W) CHROMATOGR?)
L4 4848 S ISOELECTRIC (2W) FOCUS?
L5 1957 S ELECTROFOCUS? OR (ELECTRO (W) FOCUS?)
L6 27929 S L1 OR L2 OR L3 OR L4 OR L5
L7 13853 S (LIGHT OR LASER) (3A) SCAN?
L8 44 S L6 AND L7

=> d 18 4 10 12 27 28 29 40 41 42 bib ab

L8 ANSWER 4 OF 44 CAPLUS COPYRIGHT 2003 ACS
AN 2002:575202 CAPLUS
DN 137:121880
TI High-throughput DNA sequencing apparatus using **capillary** gel **electrophoresis**
IN Olivares, Jose A.; Stark, Peter C.
PA The Regents of the University of California, USA
SO PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002059273	A2	20020801	WO 2002-US2204	20020124

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2001-771277 A 20010126

AB An electrophoretic device like a gel separates and detects particles such as DNA fragments, proteins, and the like. The device has a capillary which is coated with a coating with a low refractive index such as Teflon AF. The refractive index may range from 1.1 to 1.4. A sample of particles is fluorescently labeled and injected into the capillary. The capillary is filled with an electrolyte buffer soln and also serves as a wave-guide. An elec. field is applied across the capillary causing the particles to migrate from a first end of the capillary to a second end of the capillary. The excitation beam has power between 1-1000 mW and a width in the range of 5-1000 .mu.m. The gel has a concn. between 0.1-5% and a viscosity from 0.5-50 cp at room temp. and the capillary has a length from 5-100 cm. A detector **light** beam is then **scanned** along the length of the capillary to detect the location of the sepd. particles. The device is amenable to a high throughput system by providing addnl. capillaries. The device can also be used to det. the actual size of the particles and for DNA sequencing and sepn. of a 1500 bp DNA ladder is provided as a example.

L8 ANSWER 10 OF 44 CAPLUS COPYRIGHT 2003 ACS
AN 2001:757526 CAPLUS
DN 135:366135
TI Fluorescence detection in capillary arrays based on galvanometer step scanning
AU Xue, Gang; Yeung, Edward S.
CS Ames Laboratory-USDOE and Department of Chemistry, Iowa State University, Ames, IA, USA

DN 116:79843
TI Apparatus and method for detecting sample movement in separatory capillary column chromatography and **capillary electrophoresis**
IN Kitamori, Takehiko; Go, Ienari; Sawada, Shiro; Imai, Kazunari; Koga, Tadataka
PA Hitachi, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03252547	A2	19911111	JP 1990-49315	19900302
	JP 2539528	B2	19961002		
	US 5211829	A	19930518	US 1991-664604	19910304
PRAI	JP 1990-49315		19900302		

L12 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2003 ACS
AN 1965:18766 CAPLUS
DN 62:18766
OREF 62:3379h,3380b
TI Correction for non-linearity in the response of the Chromoscan
AU Albert-Recht, F.; Owen, J. A.
CS Roy. Infirmary, Edinburgh, UK
SO Clin. Chim. Acta (1964), 10(6), 577-80
DT Journal
LA English

L12 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2003 ACS
AN 1958:40999 CAPLUS
DN 52:40999
OREF 52:7400h-i,7401a
TI Automatic recorder for paper electrophoresis
AU Zicha, B.; Kalousova, V.; Sobotka, V.; Marcan, K.
CS Vysoka skola elektrotechnol., Prague
SO Sbornik Ceskoslov. akad. zemedel. ved, Vet. med. (1957), 2, 135-46
DT Journal
LA English

=> d his

(FILE 'HOME' ENTERED AT 10:32:25 ON 23 APR 2003)

FILE 'CAPLUS' ENTERED AT 10:32:31 ON 23 APR 2003

L1	17536	S CAPILLARY (3W) ELECTROPHOR?
L2	2020	S ELECTROKINETIC (3W) CHROMATOGR?
L3	3004	S ELECTROCHROMATOGR? OR (ELECTRO (W) CHROMATOGR?)
L4	4848	S ISOELECTRIC (2W) FOCUS?
L5	1957	S ELECTROFOCUS? OR (ELECTRO (W) FOCUS?)
L6	27929	S L1 OR L2 OR L3 OR L4 OR L5
L7	13853	S (LIGHT OR LASER) (3A) SCAN?
L8	44	S L6 AND L7
L9	102	S (LIGHT OR LASER) (3A) RASTER?
L10	0	S L9 AND L6
L11	3392	S (LIGHT OR LASER) (3A) (TRAVEL? OR MOV?)
L12	8	S L11 AND L6

WEST

Freeform Search

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Term: L37 and l32

Display: 10 **Documents in Display Format:** - **Starting with Number** 1

Generate: ○ Hit List ◉ Hit Count ○ Side by Side ○ Image

Search | Clear | Help | Logout | Interrupt

Main Menu | Show S Numbers | Edit S Numbers | Preferences | Cases

Search History

DATE: Wednesday, April 23, 2003 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=JPAB,EPAB,DWPI; PLUR=YES; OP=OR			
L38	L37 and l32	7	L38
L37	(laser or light) near5 (mov$4 or travel$4)	38753	L37
L36	L35 and L32	0	L36
L35	(laser or light) near5 raster$4	1184	L35
L34	L33 and l32	14	L34
L33	(light or laser) near5 scan$4	48642	L33
L32	L31 or l30 or l29 or l28 or l27 or l26 or l25	1899	L32
L31	electrokinetic adj3 chromatograph$4	47	L31
L30	isoelectric adj2 focus$4	405	L30
L29	electrofocus$4 or (electro adj focus$4)	56	L29
L28	electrokinetic adj3 chromatogarph$4	0	L28

L27	L26	103	L27
L26	electrochromatograph$6 or (electro adj chromatograph$4)	103	L26
L25	capillary adj3 electrophor$8	1376	L25
DB=USPT; PLUR=YES; OP=OR			
L24	L20 not L23	85	L24
L23	l20 not L22	68064	L23
L22	L21 not (l14 or l18)	85	L22
L21	L20 and l12	146	L21
L20	(light or laser) near5 (travel$4 or mov$4)	68149	L20
L19	L18 not l14	9	L19
L18	L17 and l12	20	L18
L17	raster$4	28387	L17
L16	L13 not L15	152	L16
L15	L13 not L14	50854	L15
L14	L13 and l12	152	L14
L13	(light or laser) near5 scan$6	51006	L13
L12	L11 and l5	1297	L12
L11	L10 or l9 or l8 or l7 or l6	6891	L11
L10	electrofocus$4 or (electro adj focus$4)	326	L10
L9	isoelectric adj3 focus$6	3309	L9
L8	electrokinetic adj chromatograph$4	99	L8
L7	electrochromatograph$8 or (electro adj chromatograph$8)	260	L7
L6	capillary adj3 electrophor$8	3611	L6
L5	l2 or l3 or l4	140168	L5
L4	((250/$)!.CCLS.)	71586	L4
L3	((356/$)!.CCLS.)	40233	L3
L2	((204/$)!.CCLS.)	42746	L2
L1	((204/$)!.CCLS.)	42746	L1

END OF SEARCH HISTORY

WEST

End of Result Set

Generate Collection Print

L17: Entry 9 of 9 File: USPT Dec 3, 1991

DOCUMENT-IDENTIFIER: US 5069766 A
TITLE: Suppression of electroendosmosis in capillary electrophoresis

Detailed Description Text (4):
Examples of polymers suitable for use in this invention are cellulose derivatives, polyalkylene glycols, saccharide-based and substituted saccharide-based polymers, polysilanes, polyacrylamide, polyvinylalcohol and polyvinylpyrrolidone. Examples of cellulose derivatives are sodium carboxymethyl cellulose, sodium carboxymethyl 2-hydroxyethyl cellulose, 2-hydroxyethyl cellulose, 2-hydroxypropyl cellulose, methyl cellulose, hydroxypropyl methyl cellulose, hydroxyethyl methyl cellulose, hydroxybutyl methyl cellulose, and hydroxyethyl ethyl cellulose. Examples of polyalkylene glycols are polyethylene and polypropylene glycols. Examples of saccharide-based and substituted saccharide-based polymers, both linear and branched, which are useful in the invention are dextran, hyaluronic acid (a polymer of acetylglucosamine and glucuronic acid as alternating units), locust-bean gum (a polysaccharide plant mucilage which is essentially galactomannan), Polytran (a scleroglucan available from Pillsbury Co., Minneapolis, Minnesota), Pustulan (a polysaccharide available from Calbiochem Corp., San Diego, California), amylose, amylopectin, soluble starch and hydroxylpropyl starch.

Current US Original Classification (1):
204/454

CLAIMS:

12. A method in accordance with claim 1 in which said additive is a water-soluble polymer selected from the group consisting of cellulose derivatives, polyalkylene glycols, saccharide-based and substituted saccharide-based polymers, polysilanes, polyacrylamide, polyvinylalcohol and polyvinylpyrrolidone.

24. A method in accordance with claim 21 in which said additive is a water-soluble polymer selected from the group consisting of cellulose derivatives, saccharide-based and substituted saccharide-based polymers, polysilanes, polyvinylalcohol and polyvinylpyrrolidone.

TEACH POLYVINYLPYRROLIDONE AS DEACTIVATING AGENTS

L17: Entry 8 of 9 File: USPT Aug 13, 1996

DOCUMENT-IDENTIFIER: US 5545302 A
TITLE: Suppression of electroendosmosis during electrophoresis in gel-free polymer media by use of charged polymers

Detailed Description Text (6):
Examples of polymers suitable for use in this invention are cellulose derivatives, saccharide-based and substituted saccharide-based polymers, polysilanes, polyacrylamide, polyvinylalcohol and polyvinylpyrrolidone. Examples of cellulose derivatives are sodium carboxymethyl cellulose, sodium carboxymethyl 2-hydroxyethyl cellulose, 2-hydroxyethyl cellulose, 2-hydroxypropyl cellulose, methyl cellulose, hydroxypropyl methyl cellulose, hydroxyethyl methyl cellulose, hydroxybutyl methyl cellulose, and hydroxyethyl ethyl cellulose. Examples of saccharide-based and substituted saccharide-based polymers, both linear and branched, are dextran, hyaluronic acid (a polymer of acetylglucosamine and glucuronic acid as alternating units), locust-bean gum (a polysaccharide plant mucilage which is essentially galactomannan), Polytran (a seleroglucan available from Pillsbury Co., Minneapolis, Minn.), Pustulan (a polysaccharide available from Calbiochem Corp., San Diego, Calif.), carrageenan (a charged polysaccharide), guar gum (a neutral polysaccharide), pectin (a polyuronide consisting chiefly of partially methoxylated galactouronic acids joined in long chains), amylose, amylopectin, soluble starch and hydroxypropyl starch. Polymers of particular interest are methyl cellulose, hydroxypropylmethyl cellulose, hydroxyethylmethyl cellulose, hydroxybutylmethyl cellulose, dextran and agarose. The most preferred polymers are hydroxypropylmethyl cellulose and dextran.

Current US Original Classification (1):
204/454

CLAIMS:

3. A method in accordance with claim 1 in which said hydrophilic polymer is a member selected from the group consisting of cellulose derivatives, saccharide-based and substituted saccharide-based polymers, polysilanes, polyacrylamides, polyvinylalcohol and polyvinylpyrrolidone.

22. A method in accordance with claim 18 in which said hydrophilic polymer is a member selected from the group consisting of cellulose derivatives, saccharide-based and substituted saccharide-based polymers, polysilanes, polyacrylamides, polyvinylalcohol and polyvinylpyrrolidone.

09/771277

WEST

Generate Collection

L38: Entry 1 of 7 File: JPAB Feb 25, 2000

PUB-NO: JP02000055879A
DOCUMENT-IDENTIFIER: JP 2000055879 A
TITLE: ISOELECTRIC FOCUSING APPARATUS

PUBN-DATE: February 25, 2000

INVENTOR-INFORMATION:

NAME	COUNTRY
TANAKA, HIROSHI	

ASSIGNEE-INFORMATION:

NAME	COUNTRY
SHIMADZU CORP	

APPL-NO: JP10223991
APPL-DATE: August 7, 1998

INT-CL (IPC): G01 N 27/447; G01 N 21/64

ABSTRACT:

PROBLEM TO BE SOLVED: To correctly automatically identify a pH of sample components.

SOLUTION: A plurality of kinds of marker samples are separated. A separation state is detected by a light-detecting means 2 without moving a zone and stored in a detection signal-storing part 4. A pH gradient function f(x) is calculated on the basis of a detection point and an isoelectric point of each marker sample by a pH gradient function-operating part 6 and stored in a pH gradient function-storing part 12. The plurality of kinds of marker samples together with a sample are separated, and a separation state is detected by the light- detecting means 2 and stored in the detection signal-storing part 4. The pH gradient function f(x) in the pH gradient function-storing part 12 is moved in parallel or extended/shrunken on the basis of a detection position and an isoelectric point of the marker samples of the second analysis data, whereby a pH gradient function g(x) is obtained. A pH of a separated sample component is determined from the pH gradient function g(x) and the second analysis data by a sample component-identifying part 10.

09/771,277

WEST

Generate Collection

L38: Entry 6 of 7 File: DWPI Mar 17, 1998

DERWENT-ACC-NO: 1998-235619
DERWENT-WEEK: 199821

TITLE: Capillary electrophoresis apparatus for analysis of protein, nucleic acid, DNA - includes CPU that outputs drive signal to pulse motor drive circuit of stage based on detected intermediate value

PATENT-ASSIGNEE:

ASSIGNEE	CODE
SHIMADZU CORP	SHMA

PRIORITY-DATA: 1996JP-0230655 (August 30, 1996)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 10073568 A	March 17, 1998		005	G01N027/447

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP 10073568A	August 30, 1996	1996JP-0230655	

INT-CL (IPC): G01 N 21/47; G01 N 27/447

ABSTRACTED-PUB-NO: JP 10073568A
BASIC-ABSTRACT:

Apparatus has an electrophoresis chip (1) that has a pair of board-like members. A migration groove (2) is formed in one surface of first board-like member. A through-hole is formed in second board-like member. The laser from a light source (5) is irradiated on the chip. A detector (11) is arranged opposite to the light source. The chip is moved by a stage (3) in a direction orthogonal to the laser preparation direction. The peak value of various light beam from the chip is detected by the detector. A CPU (14) computes the intermediate value of adjacent peak values. The CPU outputs the drive signal to a pulse motor drive circuit (15) of the stage based on detected intermediate value.

ADVANTAGE - Enables automatic optical axis alignment of light source. Shortens time required for exchange of electrophoresis chip. Reduces variation in detection signal.

CHOSEN-DRAWING: Dwg.1/3

TITLE-TERMS: CAPILLARY ELECTROPHORESIS APPARATUS ANALYSE PROTEIN NUCLEIC ACID DNA CPU OUTPUT DRIVE SIGNAL PULSE MOTOR DRIVE CIRCUIT STAGE BASED DETECT INTERMEDIATE VALUE

DERWENT-CLASS: B04 D16 J04 S03

CPI-CODES: B11-C08D1; B12-K04; D05-H09; D05-H18A; J03-C;

EPI-CODES: S03-E03E; S03-E04C; S03-E09C7A; S03-E14H; S03-E14H5;

CHEMICAL-CODES:

Chemical Indexing M1 *01*
Fragmentation Code

09/771,277

WEST

Generate Collection

L38: Entry 3 of 7 File: JPAB Mar 17, 1998

PUB-NO: JP410073568A
DOCUMENT-IDENTIFIER: JP 10073568 A
TITLE: CAPILLARY ELECTROPHORESIS DEVICE

PUBN-DATE: March 17, 1998

INVENTOR-INFORMATION:

NAME	COUNTRY
ARAI, AKIHIRO	

ASSIGNEE-INFORMATION:

NAME	COUNTRY
SHIMADZU CORP	

APPL-NO: JP08230655
APPL-DATE: August 30, 1996

INT-CL (IPC): G01 N 27/447; G01 N 21/47

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a capillary electrophoresis device which can automatically make optical axis alignment.

SOLUTION: A movable stage 3 is moved so that a laser beam can traverse an electrophoresis groove 2 on an electrophoresis chip 1. Since the laser beam has a diameter of about 10m and the groove 2 has a width of 30m and an inverted trapezoidal cross section, the scattered light of the laser beam becomes the maximum when the laser beam hits the side face of the groove 2 and minimum when the laser beam hits the central part. The scattered light reaches a photomultiplier 11 through an interference filter 9. A CPU 14 stores the position (of the stage 3) at which the first peak is detected by moving the stage 3 and the position (of the stage 3) at which the second peak is detected by further moving the stage 3. Then the CPU 14 returns the stage 3 so that the laser beam can be positioned to the middle of the two positions by sending a drive signal to a pulse motor driving circuit 15.